CLAIMS

What is claimed is:

1   1.   A method of collecting statistics in a database management system, comprising:
2   receiving a workload comprising a plurality of database queries;
3   identifying query statistics for the database queries;
4   consolidating the query statistics for the database queries to provide consolidated
5   statistics; and
6   generating one or more statistics collection tasks based on the consolidated
7   statistics.

1   2.   The method of claim 1 wherein the database management system comprises one
2   or more collection objects and the consolidated statistics are associated with at least a
3   subset of the collection objects, and said generating generates the one or more statistics
4   collection tasks for respective collection objects of the subset based on the consolidated
5   statistics.

1   3.   The method of claim 2 wherein said generating generates one statistics collection
2   task for each collection object of the subset of the collection objects based on the
3   consolidated statistics.

1   4.   The method of claim 2 wherein the collection objects are table spaces.

1   5.   The method of claim 1 wherein the query statistics comprise table information for
2   a plurality of tables, the tables being associated with collection objects, wherein said
3   generating groups the statistics collection tasks for the tables by collection object.

1   6.   The method of claim 5 wherein each table of the plurality of tables is associated
2   with a table score based on, at least in part, a number of references to the table by the
3   queries of the workload, further comprising:

4   determining a collection object score for each collection object based on, at least

5   in part, the table scores for the associated tables of the collection object to provide

6   collection object scores, wherein said generating generates the statistics collection tasks

7   for the collection objects in accordance with the collection object scores.

1   7.   The method of claim 6 wherein the table score is also based on, at least in part, a

2   cost of the queries referencing the table.

1   8.   The method of claim 1 wherein the query statistics comprise column information,

2   and when a column specified in the column information is part of an index, generating an

3   index portion of the statistics collection task to request database statistics for that column.

1   9.   An article of manufacture comprising a computer usable medium embodying one

2   or more instructions executable by a computer for performing a method of collecting

3   statistics in a database management system, the method comprising:

4   receiving a workload comprising a plurality of database queries;

5   identifying query statistics for the database queries;

6   consolidating the query statistics for the database queries to provide consolidated

7   statistics; and

8   generating one or more statistics collection tasks based on the consolidated

9   statistics.

1   10.   The article of manufacture of claim 9 wherein the database management system

2   comprises one or more collection objects and the consolidated statistics are associated

3   with at least a subset of the collection objects, and said generating generates the one or

4   more statistics collection tasks for respective collection objects of the subset based on the

5   consolidated statistics.

1   11.   The article of manufacture of claim 10 wherein said generating generates one

2   statistics collection task for each collection object of the subset of the collection objects

3   based on the consolidated statistics.

1   12.   The article of manufacture of claim 11 wherein the collection objects are table

2   spaces.

1   13.   The article of manufacture of claim 9 wherein the query statistics comprise table

2   information for a plurality of tables, the tables being associated with collection objects,

3   wherein said generating groups the statistics collection tasks for the tables by collection

4   object.

1   14.   The article of manufacture of claim 13 wherein each table of the plurality of

2   tables is associated with a table score based on, at least in part, a number of references to

3   that table by the queries of the workload, further comprising:

4   determining a collection object score for each collection object based on, at least

5   in part, the table scores for the associated tables of the collection object to provide

6   collection object scores, wherein said generating generates the statistics collection tasks

7   for the collection objects in accordance with the collection object scores..

1   15.   The article of manufacture of claim 6 wherein the table score is also based on, at

2   least in part, a cost of the queries referencing the table.

1   16.   The article of manufacture of claim 1 wherein the query statistics comprise

2   column information, and when a column specified in the column information is part of an

3   index, generating an index portion of the statistics collection task to request database

4   statistics for that column.

1   17.   An apparatus for collecting statistics in a database management system,

2   comprising:

3   a processor; and

4   a memory storing one or more instructions that:

5   receive a workload comprising a plurality of database queries;

6   identify query statistics for the database queries;

7   consolidate the query statistics for the database queries to provide

8   consolidated statistics; and

9   generate one or more statistics collection tasks based on the consolidated

10   statistics.

1   18.   The apparatus of claim 17 wherein the database management system comprises

2   one or more collection objects and the consolidated statistics are associated with at least a

3   subset of the collection objects, and said one or more instructions generate the one or

4   more statistics collection tasks for respective collection objects of the subset based on the

5   consolidated statistics.

1   19.   The apparatus of claim 18 wherein said one or more instructions also generate one

2   statistics collection task for each collection object.

1   20.   The apparatus of claim 18 wherein the collection objects are tablespaces.